

## Three New Species of the Anthomyiidae from Yunnan Province, China (Diptera: Anthomyiidae)

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**Abstract:** The present paper deals with three new species of the genera *Phorbia*, *Pegoplata* and *Pegomya* from Yunnan Province, China, namely *Phorbia fani* sp. nov., *Pegoplata lengshanensis* sp. nov. and *Pegomya yunnanensis* sp. nov. All the type specimens are deposited in Institute of Entomology, Shenyang Normal University, Shenyang.

**Key words:** Diptera; Anthomyiidae; *Phorbia*; *Pegoplata*; *Pegomya*; New species; China

Anthomyiidae has been recorded 612 species in China, including *Phorbia* 25 species, *Pegomya* 96 species. In recent years, after researching the specimens collected from Yunnan Province by Health and Anti-epidemic Station of Yunnan Province, three species were found new to science. Now, they will be reported as follows:

### 1 *Phorbia fani* sp. nov. (Figs. 1 - 5)

**Etymology:** The new species is named after Professor FAN Zi-De, Shanghai Institute of Entomology, the Chinese Academy of Sciences, in honor of his outstanding work on the Chinese flies and great helps to the author.

♂ Length of body 5.0 mm. Eyes bare; frons narrower than the width of anterior ocellus; interfrontalia black, without *if*; parafrontaliae approximated, with 5 pairs of inclinate *ori*, with 1 small *ors*, parafacialiae and genae brown pollinose; parafacialia about wider than the width of  $A_3$ ; antennae black,  $A_3$  about 1.8 times as long as wide; arista pubescent, the longest hair about equal to the diameter of basal part of arista; epistoma behind frons at lunule; genal height about 1/6 of eye height, with genal setae in 2 rows; occiput with 1 - 2 rows of setulae on upper part, hairs of meta-

cephalon black; prementum covered with gray pollen, and about 4.0 times as long as high; palpi black.

**Thorax.** Ground color black and dense brownish in pollinosity; mesonotum when viewed from behind without apparent vittae, with 1 pair of small *pre acr*, *post acr* 2 - 3; *dc* 2 + 3; *ia* 0 + 2; *ph* 1 : 2; *pra* longer than length of anterior *npl*; posterior *npl* absent, notopleura with no accessory setulae; mesopleura with no distinct anterior *mpl*, poststigma small, *stpl* 1 : 2.

**Wings** brownish, dark on the basal part; basicoستا black, costal spine indistinct, costa with setulae on ventral surface; m-m cross vein straight. Calypters white, lower one not protruded beyond the upper. Halteres yellowish.

**Legs.** Wholly black; fore tibia with 1 pre-apical *d* and 1 medial *pv*; mid and hind legs lost.

**Abdomen** wholly black in ground color, with dark gray pollen, cone-formed in dorsal view, dorsoventrally compressed on the basal half; 2nd to 5th tergites each with a black wide median macula; 6th tergite bare, 6th to 9th tergites black and bright; 1st sternite haired, 5th sternite reveal, and with small setulae on the outer margin; surstyli yellow, and with soft hairs on the medial part of anterior margin; the right prego-

收稿日期: 2001 - 05 - 14; 修改稿收到日期: 2001 - 07 - 06

基金项目: This study was supported by Liaoning Province Natural Science Foundation

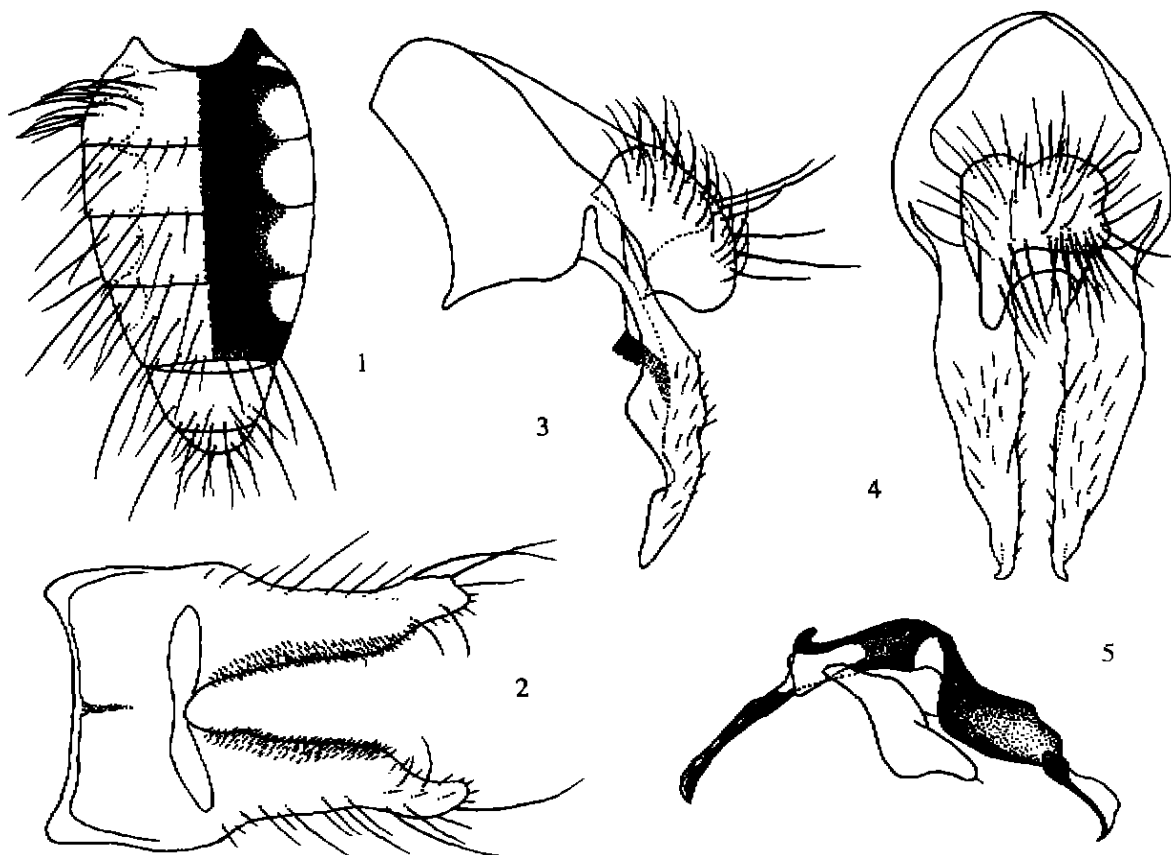
nites wide and large, distal part thin.

♀ Unknown.

Holotype ♂, Luquan, 3 500 m, Yunnan Province, 10 - IV - 1987, by LI Fu-Hua.

This new species is similar to *Phorbia omeishanensis* Fan, 1982, but differs from the latter in having

male with 1 *ors* and 1 pair of small *pre acr*, *ph* 1:2, posterior *npl* absent; inner margin of lateral lobe of 5th sternite with 4 rows of small hairs; medial part of surstylus wider in profile, distal part straight in posterior view.



Figs. 1 - 5 *Phorbia fani* sp. nov. (♂)

1. Abdomen in dorsal view; 2. 5th sternite in ventral view; 3. Terminalia in profile; 4. Terminalia in posterior view; 5. Genitalia in profile.

## 2 *Pegoplata lengshanensis* sp. nov. (Figs. 6 - 11)

Etymology: The stem "lengshan" of the specific name is from the name of a mountain where the type collected.

♂ Length of body 5.0 mm. Eyes bare; frons narrower than the width of anterior ocellus; parafrontaliae approximated and with 3 pairs of inclinate *ori*, interfrontalia brownish and with small *if*, without *ors*; parafacialiae and facialiae black in ground color, and covered with grayish pollen, parafacialia equal to 2/3

width of antenna; antennae brown, *A*<sub>3</sub> about 2.5 times as long as wide; arista long pubescent, the longest hair about equal to 2 times the diameter of basal arista; epistoma behind frons at lunule; genal height equal to 1/6 of eye height; occiput with no setulae on upper part; prementum covered with gray pollen, palpi yellow.

Thorax black in ground color, and covered with gray pollen; mesonotum with 3 brown vittae; with 3 pairs of *pre acr*; *dc* 2 + 3; *ph* 1:1; *pra* absent; notopleura without accessory setulae; mesopleura without distinct anterior *mpl*; post-stigma small; *stpl* 2(3):2.

Wings light fuscous hyaline; basicosta orange, costal spines small, costa with setae on ventral surface; m-m cross vein straight. Calypters yellowish, lower one not protruded beyond the upper. Halteres yellow.

Legs. Dark brown except femora brown and tibiae yellow; fore tibia with 1 medial *ad*, without *pv*; mid femur with 2 sub-basal *pv*, without *av*, mid tibia with 1 *ad*, 1 *pd* and 1 (0) *p*; hind femur with a complete row of *av*, row of *pv* disconnected on the sub-basal part, hind tibia with 1 *av*, 2 *ad* and 2 *pd*, without apical *pv*; claws equal to length of pulvilli.

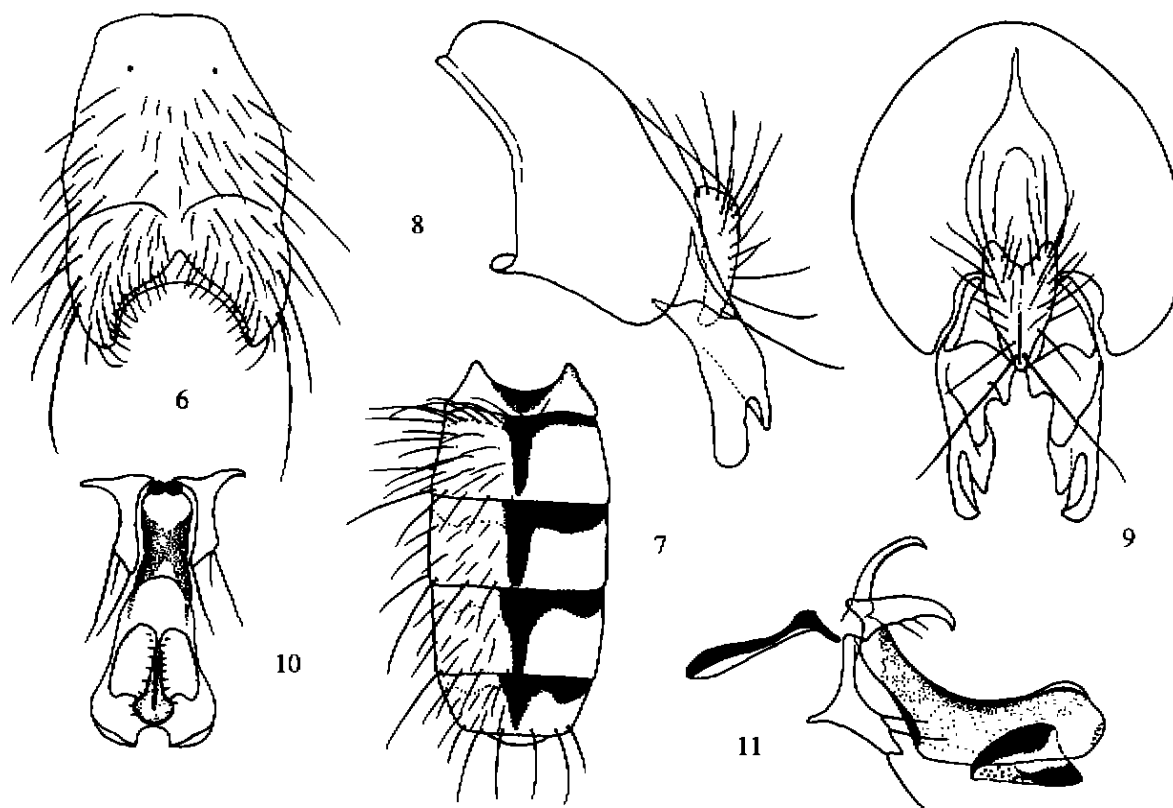
Abdomen. Wholly black in ground color, longish rectangular in dorsal view, dorsoventrally compressed, densely covered with blue gray pollen, 2nd to 5th ter-

gites each with a "T"-shaped dark black macula; 6th tergite bare; 1st sternite with hairs.

♀ Unknown.

Holotype ♂, Mt. Lengshan, 2 200 m, Lanping, Yunnan Province, 1 - VII - 1986, by LI Fu-Hua.

This new species resembles the *Pegoplata henanensis* (Ge et Fan, 1982), but it differs from the latter in having male with *if*, parafacialia equal to 2/3 width of antenna; arista long pubescent, the longest hair about equal to 2 times the diameter of basal arista (about equal to 2/5 width of antenna); occiput with no setulae on upper part; mesonotum with 3 brown vittae; hind femur with a row of *pv*; distal part of aedeagus circular, no horned protuberance extend to side.



Figs. 6 - 11 *Pegoplata lengshanensis* sp. nov. (♂)

6. 5th sternite in ventral view; 7. Abdomen in dorsal view; 8. Terminalia in profile; 9. Terminalia in posterior view; 10. Genitalia in profile; 11. Genitalia in anterior view.

### 3 *Pegomya yunnanensis* sp. nov. (Figs. 12 - 16)

Etymology: The stem "yunnan" of the specific name is from the name of a province, southwestern, China where the type locality located.

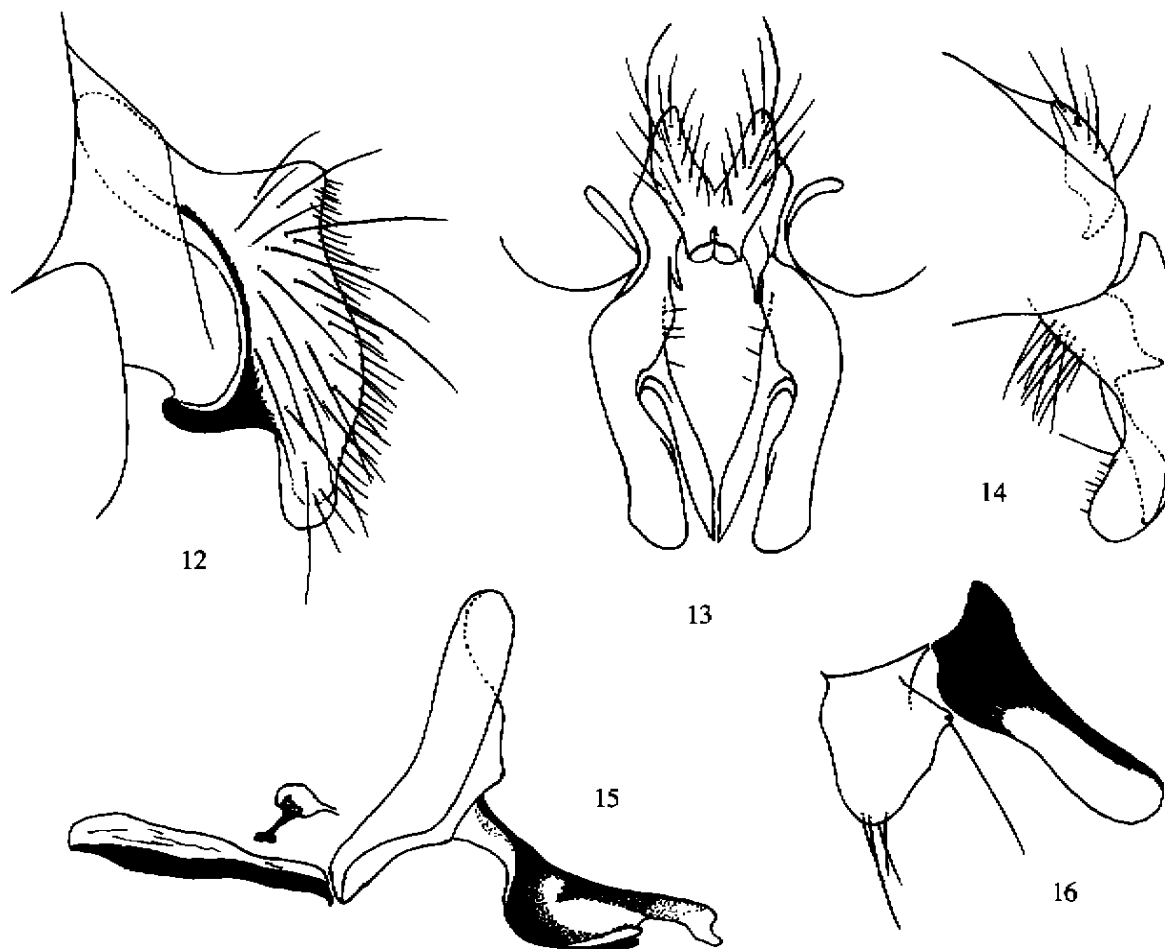
♂ Length of body 6.5 mm. Eyes bare; frons about equal to the width of anterior ocellus; parafrontaliae approximated and with 5 pairs of inclinate *ori*, parafrontaliae, parafacialiae and genae dark brown in ground color and gray pollinose; parafacialia equal to  $2/3$  width of antenna; antennae dark black, the length of  $A_3$  about 2.5 times as long as wide; arista pubescent, the longest hair shorter than the diameter of basal part of arista, thickened in basal  $1/4$ ; epistoma behind frons at lunule; genal height equal to 0.25 times of eye height, with genal setae in 2 – 3 rows; occiput with setulae on upper part, hairs of metacephalon black; haustellum with prementum blackish and with pollinose; palpi dark brown, basal part orange.

Thorax. Ground color black and gray in pollinose-

ty; mesonotum when viewed from behind with rather distinct 3 vittae, with 2 pairs of small *pre acr*, *post acr* 1; *ph* 1:1; *dc* 2+3; *ia* 0+2; *pra* longer than the length of posterior *npl*; notopleura without accessory setulae; dorsal surface of scutellum without hair. Mesopleura without anterior *mpl*; stigmata small; *stpl* 1:3.

Wings light fuscous hyaline, veins and basicosta dark brown, costal spine short and thick, costa with spinular setae on ventral surface. Calypters yellow, lower one short. Halteres yellow.

Legs. Wholly black. Fore tibia with 1 pre-apical *ad* and 2 *p*; basal part of mid femur with a row of *pv*, mid tibia with 1 *ad*, 1 *pd* and 3 *p*; hind femur each with a complete row of *av* and *pv*, long hairs-formed



Figs. 12 – 16 *Pegomya yunnanensis* sp. nov. (♂)

12. 5th sternite in profile; 13. Terminalia in posterior view; 14. Terminalia in profile; 15. Genitalia in profile; 16. Gonites in profile.

in the 1/3 basal part, 4–5 long and strong *pv* in the medial part, hind tibia with 1 *av*, 3 *ad* and 2 *pd*, without apical *pv*; tarsi normal.

Abdomen. Ground color black, cylindrical in dorsal view, with grayish pollen, black wide median vittae and anterior marginal bands of tergites checkered; 1st sternite with hairs, 2nd and 3rd sternites square, 4th sternite short, distal part of lateral lobe of 5th sternite light colour, with a sclerotic protuberance on the laterodorsal margin; 6th tergite large, not symmetric, with long setae.

♀ Unknown.

Holotype ♂, Pianma, 3 020 m, Lushui, Yun-

nan Province, 26–V–1992, by LI Fu-Hua.

This new species is close to *Pegomya japonica* Suwa, 1974, but it differs from the latter in the follows: with 2 pairs of small *pre acr*, *stpl* 1:3; mid tibia without *pv*, hind tibia with 2 *pd*; lateral lobe of 5th sternite narrower in profile; surstylus broad in posterior view, anterior margin of distal part crooked in profile; gonites different.

**Acknowledgements** I would like to thank Mr. LI Fu-Hua (Health and Anti-epidemic Station of Yunnan Province, Kunming) for collecting the type specimens.

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## 云南省花蝇科三新种 (双翅目: 花蝇科)

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**摘要:** 记述采自云南省花蝇科 3 新种, 即: ①分布于云南省禄劝的范氏草种蝇 *Phorbia fani* sp. nov., 该种近似于四川产的峨眉草种蝇 *Phorbia omeishanensis* Fan, 1982, 但新种雄性具 1 根上眶鬃; 前中鬃 1 对, 肩后鬃 1:2, 无后背侧片鬃; 第 5 腹板侧叶的内缘具 4 行小刚毛, 侧尾叶侧面观其中部宽大, 后面观其端部较直等不同于已知种。②分布于云南省兰坪冷山的冷山须泉蝇 *Pegoplata lengshanensis* sp. nov., 该种雄性主要特征近似于河南须泉蝇 *Pegoplata henanensis* (Ge et Fan, 1982), 但新种具间额鬃, 侧颜为触角宽的 2/3, 芒具长纤

毛, 最长芒毛为触角宽的 2/5 (约为芒基的 2 倍), 后头背区裸; 盾片具 3 条棕色粉被条; 后股有 1 列后腹鬃; 阳茎端部圆形, 不向两侧呈角状延伸等不同。③分布于云南省泸水片马的云南泉蝇 *Pegomya yunnanensis* sp. nov., 该种近似日本泉蝇 *Pegomya japonica* Suwa, 1974, 但新种雄性前中鬃呈 2 列体毛状, 腹侧片鬃 1+3; 中胫无后腹鬃, 后胫后背鬃 2; 第 5 腹板侧叶侧面观较细长, 侧尾叶后面观较宽, 侧面观其端部前缘稍弯曲, 前、后阳基侧突的形状不同。模式标本保存于沈阳师范大学昆虫研究所。

**关键词:** 双翅目; 花蝇科; 草种蝇属; 须泉蝇属; 泉蝇属; 新种; 中国

**中图分类号:** Q969.454.1 **文献标识码:** A **文章编号:** 0254–5853(2001)06–0485–05